REMARKS REGARDING AMENDMENTS:

The claims were amended to further clarify what the applicant considers to be his invention. Specifically, a weighting material was added to fluids of the present invention in claims 1, 12 and 24. Claim 9 was amended because one of the elements (weighting material) is now present in the independent claim 1. Claims 4 and 19 were amended to clarify the use of the terms "further comprising" and "further comprise". No new matter has been introduced by any of the above amendments.

The claims and amended claims are submitted as being clearly distinct and patentable over the art of record and therefore Applicant respectfully requests their entry and allowance by the Examiner.

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IN RESPONSE TO THE OFFICE ACTION:

REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH:

Claims 4 and 14-16 were rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite and filing to particularly point out the Applicant's invention.

In response, Applicant has amended claims 4 and 14 so as to the specific concerns indicated by the Examiner in the Office Action. Applicant respectfully submits that the above amendments obviate the rejection of the claims under 35 U.S.C. §112, second paragraph and thus ask that the Examiner reconsider and withdraw his rejection of the claims and indicate their allowance in the next paper from the Office.

FIRST REJECTION UNDER 35 U.S.C. § 102:

Claims 1-6, 8, 11-13, 17, 18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by EP 137538.

Under US patent law the Courts have ruled that for there to be anticipation under 35 U.S.C. § 102, "each and every element" of the claimed invention must be found either expressly

or inherently described in a single prior art reference. *Verdegaal Bros. Inc. v. Union Oil Co. of Cal.*, 814 F.2d 1565, 1571; 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1986) and references cited therein. See also *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571; 230 U.S.P.Q. 81, 84 (Fed. Cir. 1986) ("absence from the reference of any claimed element negates anticipation."); *In re Schreiber,* 128 F.3d 1473, 1477; 44 U.S.P.Q.2d 1429, 1431 (Fed.Cir. 1997).

EP '538 provides a biopolymer emulsion containing a polysaccharide, hydrophobic liquid, water, and an emulsifier. (Page 2, lines 30-33) The disclosure makes no mention of weighing agents. As is clearly taught by the EP '538 reference the fluids disclosed therein require the use of a biopolymer.

In contrast, the present invention is directed to an invert emulsion drilling fluid comprising an oleaginous fluid, a non-oleaginous fluid, a weighting agent, and an amine surfactant. (See Amended Claim 1) One of skill in the art will appreciate that the biopolymer emulsions disclosed in EP '538 would likely not be effective in drilling because they do not contain weighting or bridging agents. Thus, because each and every element (weighting material) has not been disclosed by EP'538, it does not anticipate the present invention.

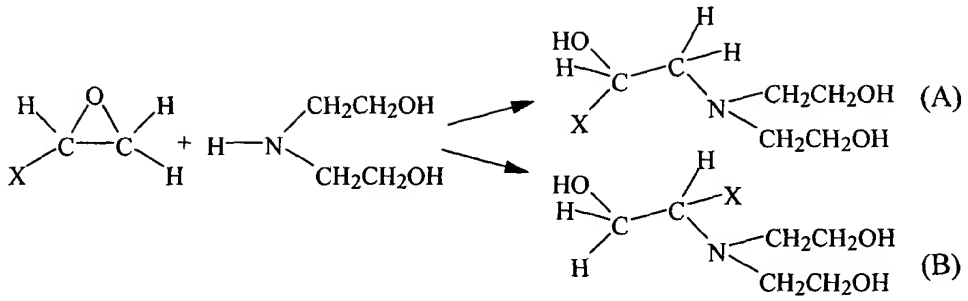
In view of the above, Applicant respectfully requests the withdrawal of the rejection of Claims 1-6, 8, 11-13, 17, 18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

SECOND REJECTION UNDER 35 U.S.C. § 102:

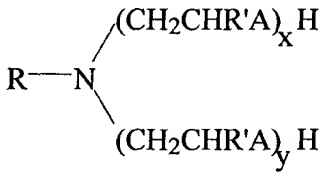
Claims 1-18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Mueller (US Patent 5,254,531).

In the interest of brevity, please refer to the prior section for establishing the elements of anticipation.

Mueller teaches an invert drilling mud including a basic amine that is the reaction product of an epoxidized C_{12-14} α - olefin and diethanolamine. The reaction in examples 2-4 is as follows:



In contrast, the present invention is directed to an invert emulsion drilling fluid comprising an amine surfactant with the following structure



wherein R is a C_{12}-C_{22} aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C_1 to C_3 alkyl; A is NH or O, and $1 \leq x+y \leq 3$.

The compounds of the instant invention are not anticipated by those disclosed in Mueller because each and every element is not present. The Mueller invention specifies a compound that contains a hydroxyl group on the terminal or penultimate carbon of the olefin chain. The "R" portion of the amine compound of the instant invention is an aliphatic hydrocarbon, i.e. only contains carbon and hydrocarbon.

In view of the above, Applicant respectfully requests the withdrawal of the rejection of Claims 1-18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

THIRD REJECTION UNDER 35 U.S.C. § 102:

Claims 1-8, 11-13, 17, 18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Voda (US Patent 3,125,517).

In the interest of brevity, please refer to the first section for establishing the elements of anticipation.

Voda teaches an invert emulsion with at least 70% aqueous phase and less than 30% oil phase, a two component emulsifying agent is required and the pH is 5-8. (see Claim 1). The two component emulsifier is disclosed in Column 3, lines 63-64. If the pH is greater than or less than this range, the emulsion breaks. (Column 7, lines 59-63). The Voda fluids also have high viscosity. (Column 1, lines 71-72). All of the examples have a viscosity greater than 300 cps at 600 rpm. (See examples). One of the goals of Voda is to eliminate the need for weighting materials. (Column 1, lines 36-44).

In contrast, the present invention the present invention is directed to an invert emulsion drilling fluid comprising an oleaginous fluid, a non-oleaginous fluid, a weighting agent, and an amine surfactant. (See Amended Claims 1 and 12)

The fluids of Voda have exactly the opposite composition as those of the present invention, they have a higher viscosity, and do not contain weighting agents. One of skill in the art will appreciate that fluids with a high viscosity cannot be effectively loaded up with weighting or bridging agents and still be useful as drilling fluids. Thus, Voda does not anticipate the compounds of the present invention because each and every element (weighting material) has not been disclosed.

In view of the above, Applicant respectfully requests the withdrawal of the rejection of Claims 1-8, 11-13, 17, 18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

FOURTH REJECTION UNDER 35 U.S.C. § 102:

Claims 1-6, 8, 11-13, 17, 18, 23 and 24 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Bleeker (US Patent 4,670,550).

In the interest of brevity, please refer to the first section for establishing the elements of anticipation.

The Bleeker reference appears to be the US version of EP'538 discussed above. The specification appears to be substantially the same so the same arguments apply to this US application as those in the First Rejection Section.

Thus, because each and every element (weighting material) has not been disclosed by Bleeker, it does not anticipate the present invention.

In view of the above, Applicant respectfully requests the withdrawal of the rejection of Claims 1-6, 8, 11-13, 17, 18, 23 and 24 and ask that the Examiner indicate the allowance of the application in the next paper from the Office.

NONSTATUTORY DOUBLE PATENTING REJECTION:

Claims 19-24 have been rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-22 of U.S. Patent No. 6,218,342 to Patel et al. In response, Applicants have filed a terminal disclaimer in compliance with 37 CFR 1.321(c). Please note that the conflicting patent is commonly owned with this application. Also, claims 19-22 were canceled in a preliminary amendment filed on 1/26/01 with the present application. Thus, claims 19-22 are not pending at this time.

In view of the above, Applicants respectfully request the Examiner to indicate the allowance of claims 23-24 in the next paper from the Office.

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Applicant hereby requests for any extension of time that may be deemed necessary to further the prosecution of this application. Applicant's representative hereby authorizes the

Commissioner to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 01-2508, referencing Order No. MIDR:582--1/WHC.

In order to facilitate the resolution of any issues or questions presented by this paper, Applicant respectfully requests that the Examiner directly contact the undersigned by phone to further the discussion.

Respectfully submitted,

Carter J. White, Ph.D.
Patent Attorney
Reg. No. 41,374
Date: 22Nov07

Claims Showing Amendments

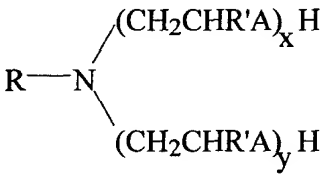
1. (Twice Amended) An invert emulsion fluid having utility for drilling, completing, or working over subterranean wells, said fluid comprising:

a) an oleaginous fluid;

b) a non-oleaginous fluid; ~~and~~

c) a weighting material; and

e~~d~~) an amine surfactant having the structure



wherein R is a C_{12}-C_{22} aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C_1 to C_3 alkyl; A is NH or O, and $1 \leq x+y \leq 3$.

4. (Amended) The invert emulsion fluid of claim 1 wherein said oleaginous fluid ~~further comprising~~ comprises from 5% to about 100% by volume of the oleaginous fluid a material selected from a group consisting of esters, ethers, acetals, di-alkylcarbonates, hydrocarbons, and combinations thereof.

9. (Amended) The invert emulsion of claim 1 further comprising ~~a weighting agent or~~ a bridging agent.

12. (Twice Amended) An invert emulsion fluid having utility for drilling completing, or working over subterranean wells, said fluid comprising:

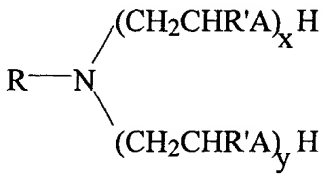
a) an oleaginous liquid, said oleaginous liquid comprising from about 30% to about 99% by volume of said fluid;

Claims Showing Amendments

b) a non-oleaginous liquid, said non-oleaginous liquid comprising from about 1% to about 70% by volume of said fluid; ~~and~~

c) a weighting agent; and

~~e~~d) an amine surfactant present in said fluid at a concentration of 0.1% to 5.0% by weight of said fluid, said amine surfactant having a structure of:



wherein R is a C_{12}-C_{22} aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C_1 to C_3 alkyl; A is NH or O, and $1 \leq x+y \leq 3$.

14. (Amended) The invert emulsion fluid of claim 13 wherein said oleaginous fluid ~~further comprising~~ comprises from 5% to about 100% by volume of the oleaginous fluid a material selected from a group consisting of esters, ethers, acetals, di-alkylcarbonates, hydrocarbons, and combinations thereof.

24. (Amended) The method of claim 23 wherein said invert emulsion drilling fluid comprises:

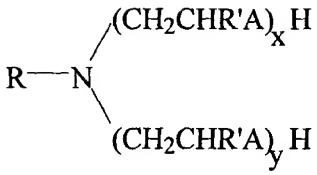
an oleaginous fluid;

a non-oleaginous fluid; ~~and~~

a weighting agent; and

an amine surfactant having the structure

Claims Showing Amendments



wherein R is a C_{12}-C_{22} aliphatic hydrocarbon; R' is an independently selectable from hydrogen or C_1 to C_3 alkyl; A is NH or O, and $1 \leq x+y \leq 3$; and

wherein the acid is functionally able to protonate the amine surfactant.